AMENDMENTS TO THE SPECIFICATION

IN THE SPECIFICATION

Please amend the paragraph beginning at page 28, line 15 as follows:

24. The method according to item 13 above, wherein each of R^3 and R^4 in formula (1) and R^9 and R^{10} in formula (2) independently represents an n-butyl group, a 2-methylpropyl group, a straight chain or branched C_5-C_{12} alkyl group, or a ~~straight chain or~~ branched C_4-C_{12} alkenyl group.

Please amend the paragraph beginning at page 150, line 4 as follows:

With respect to the multi-stage distillation column used in step (5), there is no particular limitation so long as it is a distillation column which has two or more theoretical stages and which is capable of continuous distillation. As such a multi-stage distillation column, any conventional multi-stage distillation column which is generally used in the art can be used. Examples of such multi-stage distillation columns include a plate type ~~colums~~ column using a tray,

such as a bubble-cap tray, a sieve tray, a valve tray or a counterflow tray; and packed type columns packed with various packings, such as a Raschig ring, a Lesshing ring, a Pall ring, a Berl saddle, an Interlox saddle, a Dixon packing, a McMahon packing, a Heli pack, a Sulzer packing and Mellapak. Further, a mixed type of a plate column and packed column, which comprises both a plate portion and a portion packed with packings, can also be preferably used.

Please amend the paragraph beginning at page 305, line 15 and continuing to page 306, line 16 as follows:

The liquid collected in reservoir 47 was fed through conduit 48 (equipped with preheater 49) to a continuous multi-stage distillation column 50 (inner diameter: about 5 cm; height: 2 m) (which was filled with Dixon packing (6 mmϕ)) at a middle portion thereof at a rate of about 203 g/hr, to thereby simultaneously perform a reaction and a distillation (i.e., reactive distillation). During the reactive distillation, the liquid in distillation column 50 was withdrawn from the bottom thereof. A portion of the withdrawn liquid was transferred through conduit 57 to reboiler 56 and, then, recycled to distillation column 50, so as to supply a suffi-

cient amount of heat for performing the reaction and the distillation. The reactive distillation was performed under conditions wherein the temperature of the liquid at the bottom of distillation column 50 was 235 °C, the column top pressure was about 26 kPa, and the reflux ratio was about 2. A gas distilled from the top of distillation column 50 was transferred through conduit 51 to condenser 52, to thereby condense the distilled gas. The resultant condensate was continuously withdrawn from condenser 52 and transferred through conduit 55 to reservoir ~~29~~ 126 at a rate of about 176 g/hr. The residual liquid in distillation column 50 was continuously withdrawn from the bottom thereof and transferred through conduit 57 to reservoir 58 at a rate of about 27 g/hr.

Please amend the paragraph beginning at page 306, line 17 continuing to page 307, line 3 as follows:

The condensate collected in reservoir ~~29~~ 126 contained about 300 ppm by weight of 1-butanol, about 14 % by weight of phenol, about 84 % by weight of dibutyl carbonate and about 1 % by weight of butyl phenyl carbonate, based on the weight of the condensate. On the other hand, the residual liquid collected in reservoir 58 contained about 0.5 % by weight of

dibutyl carbonate, about 31 % by weight of butyl phenyl carbonate, and about 59 % by weight of diphenyl carbonate, based on the weight of the residual liquid. Further, the residual liquid collected in reservoir 58 had a Pb content of about 10 % by weight.

Please amend the paragraph beginning at page 322, line 14 continuing to page 323, line 15 as follows:

The liquid collected in reservoir 47 was fed through conduit 48 (equipped with preheater 49) to a continuous multi-stage distillation column 50 (inner diameter: about 5 cm; height: 2 m) (which was filled with Dixon packing (6 mmϕ)) at a middle portion thereof at a rate of about 203 g/hr, to thereby simultaneously perform a reaction and a distillation (i.e., reactive distillation). During the reactive distillation, the liquid in distillation column 50 was withdrawn from the bottom thereof. A portion of the withdrawn liquid was transferred through conduit 57 to reboiler 56 and, then, recycled to distillation column 50, so as to supply a sufficient amount of heat for performing the reaction and the distillation. The reactive distillation was performed under conditions wherein the temperature of the liquid at the bot-

tom of distillation column 50 was 231 °C, the column top pressure was about 26 kPa, and the reflux ratio was about 1. A gas distilled from the top of distillation column 50 was transferred through conduit 51 to condenser 52, to thereby condense the distilled gas. The resultant condensate was continuously withdrawn from condenser 52 and transferred through conduit 55 to reservoir ~~29~~ 126 at a rate of about 181 g/hr. The residual liquid in distillation column 50 was continuously withdrawn from the bottom thereof and transferred through conduit 57 to reservoir 58 at a rate of about 22 g/hr.

Please amend the paragraph beginning at page 323, line 16 continuing to page 324, line 2 as follows:

The condensate collected in reservoir ~~29~~ 126 contained about 500 ppm by weight of 1-butanol, about 16 % by weight of phenol, about 82 % by weight of dibutyl carbonate and about 2 % by weight of butyl phenyl carbonate, based on the weight of the condensate. On the other hand, the residual liquid collected in reservoir 58 contained about 0.1 % by weight of dibutyl carbonate, about 38 % by weight of butyl phenyl carbonate and about 50 % by weight of diphenyl carbonate, based on the weight of the residual liquid. Further, the residual

liquid collected in reservoir 58 had a Pb content of about 12 % by weight.

Please amend the paragraph beginning at page 351, line 1 continuing to page 352, line 7 as follows:

The condensate (containing dibutyl carbonate) collected in reservoir ~~22~~ 29 in step (2), phenol and hafnium ethoxide (manufactured and sold by Gelest Inc., U.S.A.) were mixed together to obtain a liquid mixture having a dibutyl carbonate/phenol weight ratio of 65/35 and an Hf content of about 1 % by weight. The obtained liquid mixture was continuously fed through conduit 37 (equipped with preheater 38) to continuous multi-stage distillation column 39 (height: 2 m; inner diameter: about 5 cm) having 40 sieve trays at a middle portion thereof at a rate of about 270 g/hr, to thereby simultaneously perform a reaction and a distillation (i.e., reactive distillation). During the reactive distillation, the liquid in distillation column 39 was withdrawn from the bottom thereof. A portion of the withdrawn liquid was transferred through conduit 46 to reboiler 45 and, then, recycled to distillation column 39, so as to supply a sufficient amount of heat for performing the reaction and the distilla-

tion. The reactive distillation was performed under conditions wherein the temperature of the liquid collected at the bottom of distillation column 39 was 231 °C, the column top pressure was 2×10^5 Pa, and the reflux ratio was about 2. A gas distilled from the top of distillation column 39 was transferred through conduit 40 to condenser 41, to thereby condense the gas. The resultant condensate was withdrawn from condenser 41 and transferred through conduit 44 to reservoir 138 at a rate of about 40 g/hr. The liquid in distillation column 39 was withdrawn from the bottom thereof and transferred through conduit 46 to reservoir 47 at a rate of about 230 g/hr.

Please amend the paragraph beginning at page 352, line 8 as follows:

The condensate collected in reservoir 138 contained about 27 % by weight of 1-butanol, about 70 % by weight of phenol and about 1 % by weight of dibutyl carbonate, based on the weight of the condensate. On the other hand, the liquid collected in reservoir 47 contained about 21 % by weight of phenol, about 62 % by weight of dibutyl carbonate, about 11 % by weight of butyl phenyl carbonate, and about 1 % by weight

of diphenyl carbonate, based on the weight of the liquid collected in reservoir 47. Further, the liquid collected in reservoir 47 had ~~a Pb~~ an Hf content of about 1 % by weight.

Please amend the paragraph beginning at page 353, line 25 continuing to page 354, line 11 as follows:

The condensate withdrawn from condenser 52 through conduit 55 contained about 1 % by weight of 1-butanol, about 22 % by weight of phenol, about 68 % by weight of dibutyl carbonate and about 2 % by weight of butyl phenyl carbonate, based on the weight of the condensate. On the other hand, the residual liquid collected in reservoir 58 contained about 0.1 % by weight of dibutyl carbonate, about 50 % by weight of diphenyl carbonate and about 31 % by weight of butyl phenyl carbonate, based on the weight of the residual liquid. Further, the liquid collected in reservoir 58 had ~~a Pb~~ an Hf content of about 18 % by weight.

Please amend the paragraph beginning at page 368, line 19 continuing to page 369, line 5 as follows:

The condensate collected in reservoir ~~29~~ 126 contained

about 0.1 % by weight of 1-butanol, about 18 % by weight of phenol, about 79 % by weight of dibutyl carbonate and about 3 % by weight of butyl phenyl carbonate, based on the weight of the condensate. On the other hand, the residual liquid collected in reservoir 58 contained about 0.5 % by weight of dibutyl carbonate, about 40 % by weight of butyl phenyl carbonate and about 25 % by weight of diphenyl carbonate, based on the weight of the residual liquid. Further, the liquid collected in reservoir 58 had an Sn content of about 34 % by weight.

Please amend the paragraph beginning at page 431, line 10 continuing to page 432, line 1 as follows:

114 g of the above-obtained viscous liquid was ~~chaged~~ charged into a 200-ml autoclave (manufactured and sold by Toyo Koatsu Co., Ltd., Japan) which had a carbon dioxide gas bomb connected thereto through a SUS tube and a valve. The autoclave was sealed, and the atmosphere in the autoclave was purged with nitrogen gas. Then, the above-mentioned valve was opened to introduce carbon dioxide gas having a pressure thereof adjusted to 5 MPa into the autoclave. The introduction of carbon dioxide gas into the autoclave was performed

for 10 minutes while stirring the contents of the autoclave, and, then, stopped by closing the valve of the carbon dioxide gas bomb. Subsequently, the internal temperature of the autoclave was elevated to 120 °C while stirring. Then, a reaction was performed for 4 hours while maintaining the internal pressure of the autoclave at about 4 MPa.